

Validation Metrics -

Update

CDM/ISEA Validation Working

Group

Apr 2003

Kirsten Snell
NSLC, 05213
kirsten.snell@navy.mil
717-605-6176

Metrics

Status

-

Round 1

-

Completed

Avail Dates:

1998-1999

- **Workfiles received; 24 month analysis complete**
 - USS Normandy (CG 60)
 - USS Anzio (CG 68)
 - USS Port Royal (CG 73)
 - USS Hewitt (DD 966)
 - USS Caron (DD 970) - completed 18 mo analysis/decom Oct 01
 - USS Laboon (DDG 58)
 - USS Russell (DDG 59)
 - USS Milius (DDG 69)
 - USS Boone (FFG 28)
 - USS Austin (LPD 4)
 - USS Duluth (LPD 6)
- **Workfiles requested:**
 - USS Tarawa (LHA 1) - NNSY - funding?
 - USS Saipan (LHA 2) - NNSY - funding?
 - USS Ashland (LSD 48) - Boston - workfile parameters forwarded 7/01
- **Workfiles not available:**
 - USS Dallas (SSN 700)

Metrics

Status

-

Round 2

-

In Progress

Avail Dates:

2001-2002

- **Proposal - Apr 02**

- Re-run metrics with new group of ships to measure impact of policy/procedural changes
 - RMMCO
 - Standardized SSVA procedures
 - CILS-TAT vs non-CILS-TAT ships
 - NEMAIS Phase A

- **Workfiles received**

- USS Bunker Hill (CG 52) - completed 12 mo
- USS San Jacinto (CG 56) - completed 12 mo
- USS Shiloh (CG 67) - completed 18 mo
- USS Donald Cook (DDG 75) - completed 18 mo
- USS Saipan (LHA 2) - completed 6 mo

- **Workfiles requested:**

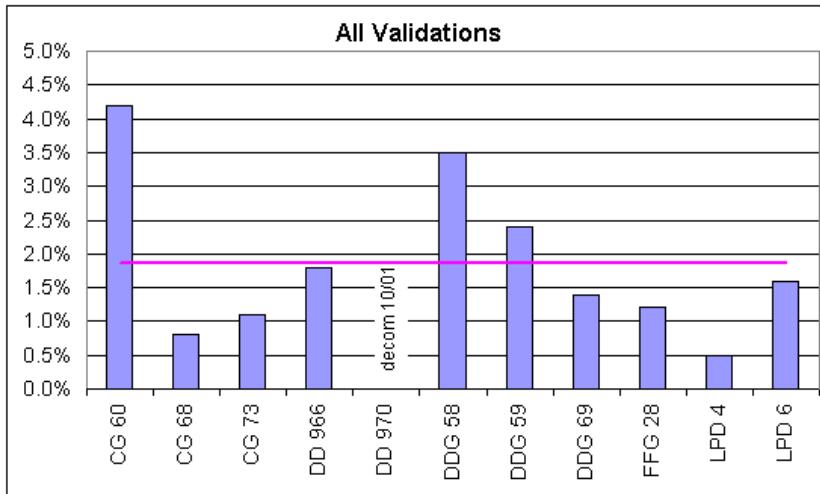
- USS Duluth (LPD 6) - NSLC Jax - no response

Validation Metrics:

- **Supply: matched Supply Issue APL to Validated APL for Adds & RIC Changes**
 - **Allowance Effectiveness**
 - Allowance Effectiveness measures the % of parts that were issued for maintenance that had an allowance in the ship's SRF in SNAP.
 - Significance: indicates how well the allowance product is supporting maintenance actions
 - Configuration accuracy is a key driving factor in maintaining correct allowances on-board ship.
 - **Volume of 'G' Source Codes**
 - Definition of a 'G' source code: 'Not Carried' repair part issued for maintenance which is not listed on an APL in the ship's COS file in SNAP.
 - Significance: causes for a 'G' source coded issues are configuration inaccuracies and/or provisioning problems

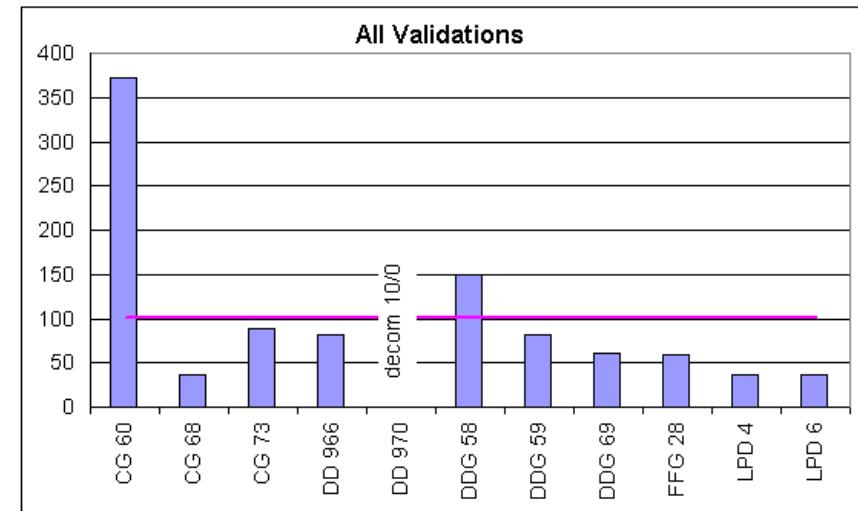
Supply Metrics - Round 1

Improvement in Allowance Effectiveness - 24 Month Measurement



- Average at 24 months: potential 1.9% increase in Allowance Effectiveness
- Average Allowance Effectiveness for total Fleet is around 74%

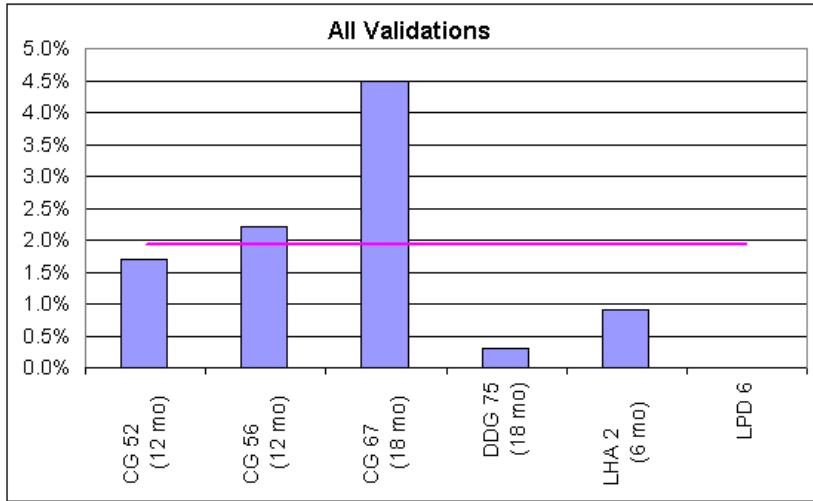
Potential G Source Coded Issues Avoided - 24 Month Measurement



- Average at 24 months: potential 100 'G' source coded issues avoided
- Avg. 'G' source code count per ship in fleet for 18 month cycle is approx. 150

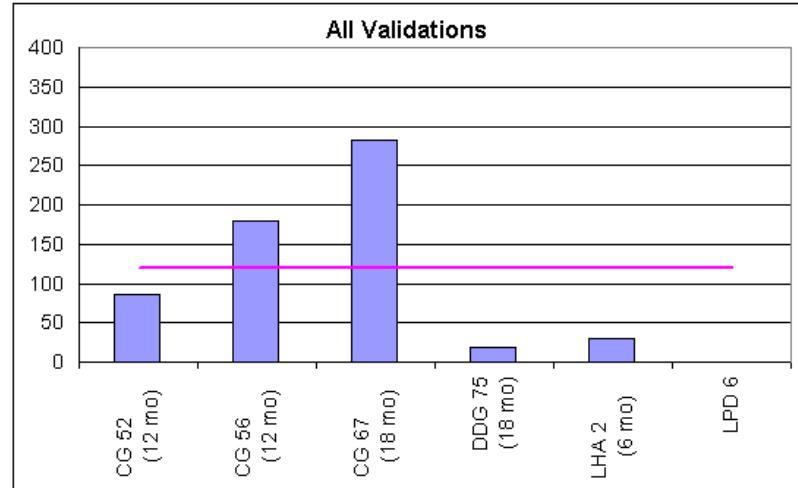
Supply Metrics - Round 2

Round 2 - Improvement in Allowance Effectiveness



- Average to date: potential 1.9% increase in Allowance Effectiveness
- Average Allowance Effectiveness for total Fleet is around 74%

Round 2 - Potential G Source Coded Issues

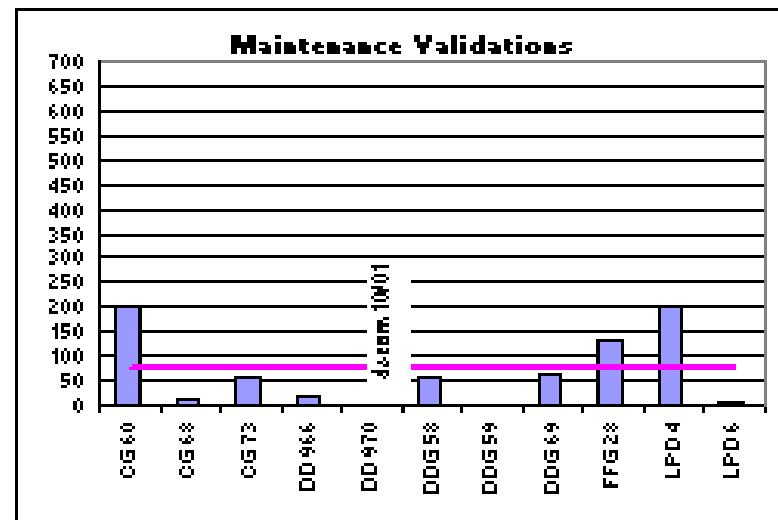
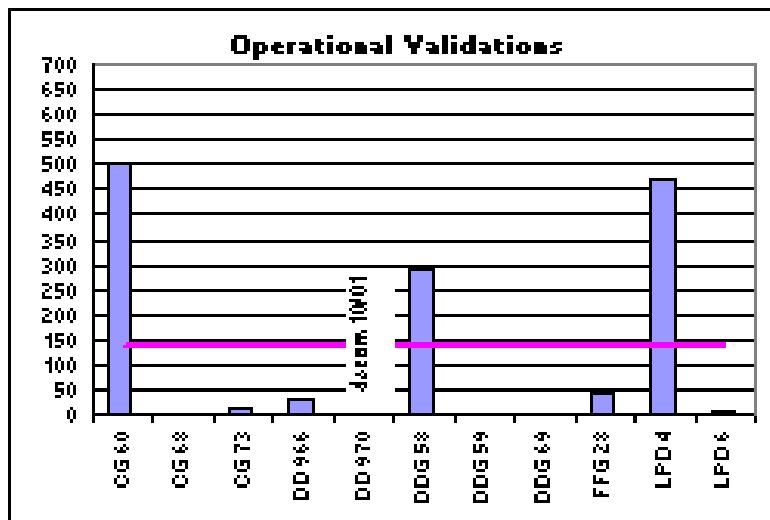
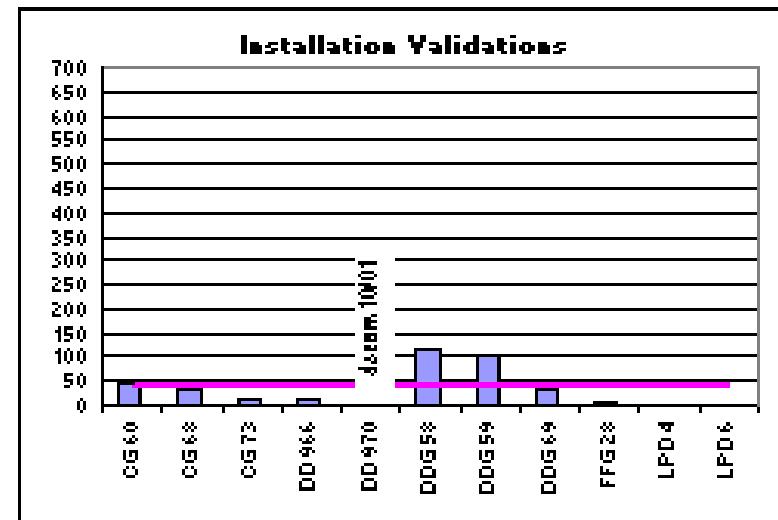
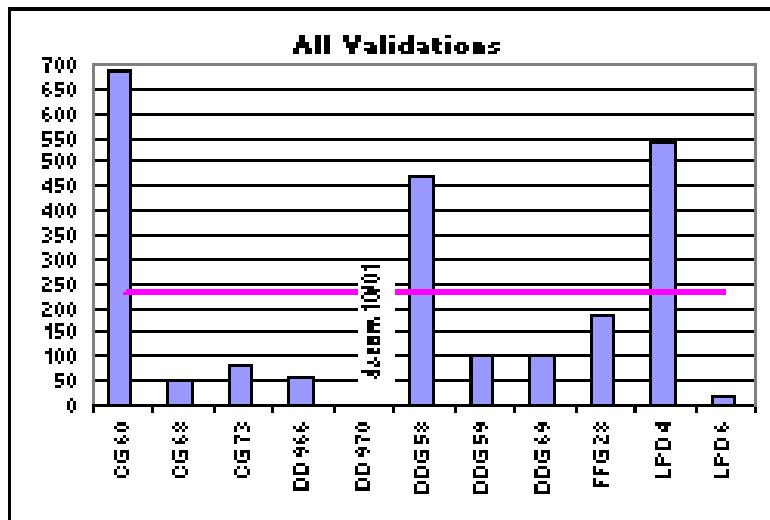


- Average to date: potential 119 'G' source coded issues avoided
- Avg. 'G' source code count per ship in fleet for 18 month cycle is approx. 150

Validation Metrics:

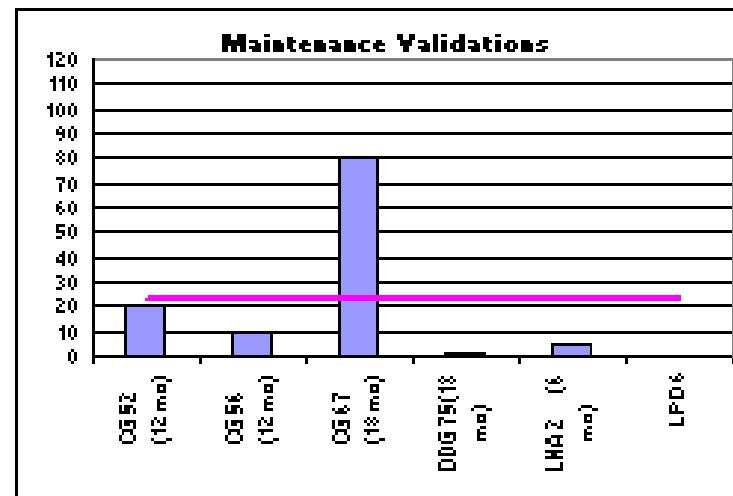
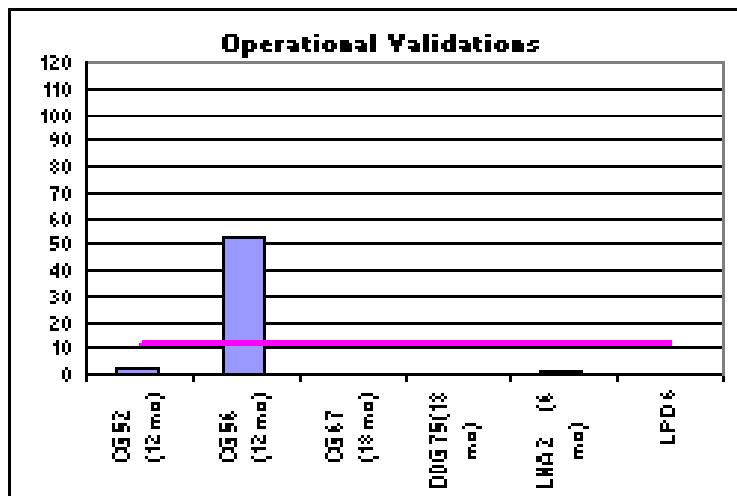
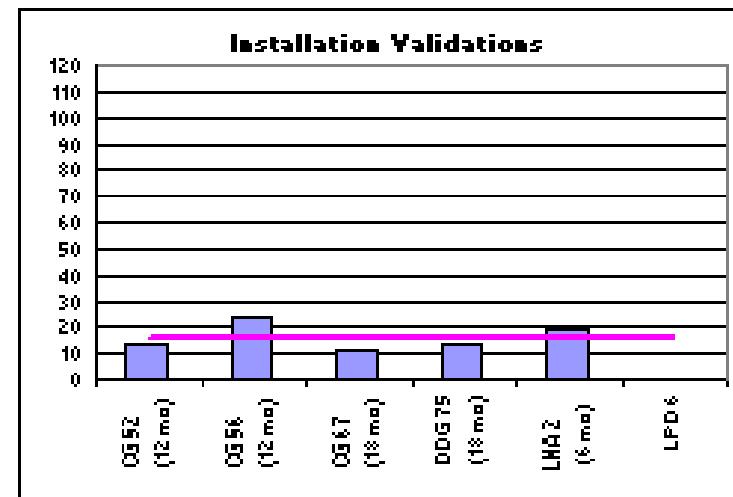
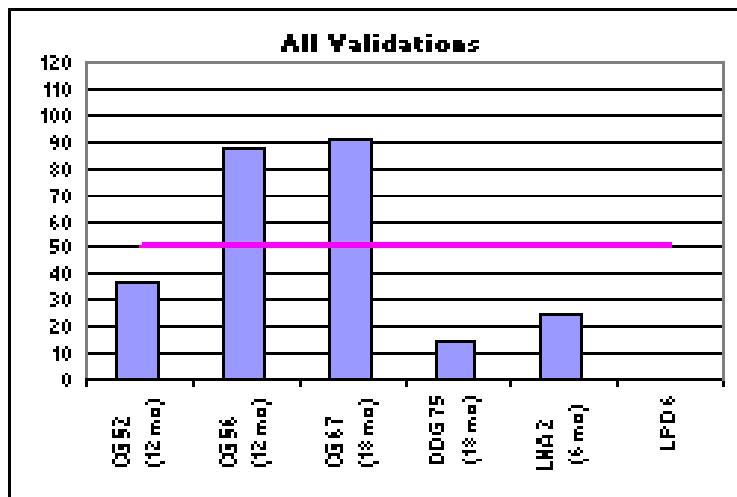
- **Maintenance: matched Maintenance API and CDM RIN to Validated API and RIN for Adds & RIC Changes**
 - **Number of Maintenance Actions**
 - Volume (count) of maintenance actions that were reported against validated API adds/RIC changes
 - Significance: How much actual maintenance did validations impact?
 - **% of Total Maintenance Actions**
 - Percentage of total maintenance actions reported against validated API adds/RIC changes
 - Calculated: (Number of maintenance actions reported against API adds/RIC changes) / Total number of maintenance actions
 - Significance: How much of the ships' overall maintenance were impacted by validations?
 - **% of Validated RICs**
 - Percentage of validated API adds/RIC Changes that had subsequent maintenance performed
 - Calculated: (Number of validated API adds/RIC changes with follow-on maintenance) / (Total number of API adds/RIC changes)
 - Significance: How successful were validations from a maintenance perspective?

Maint Actions for Validated RICs - 24 Month Measurement



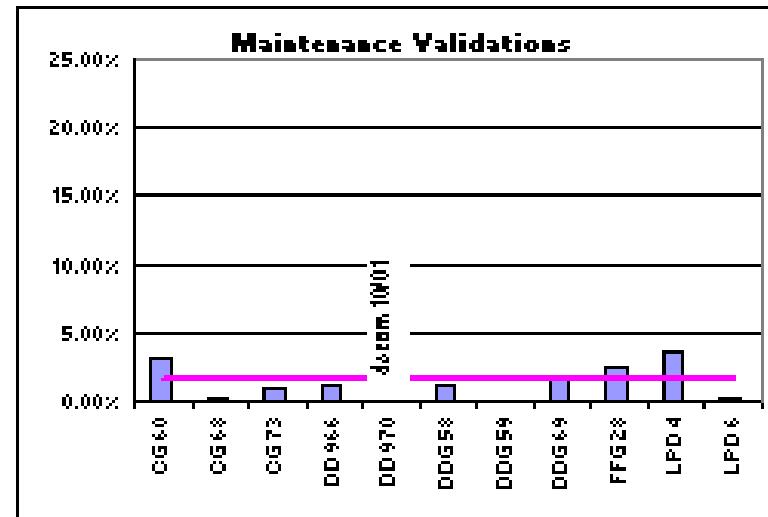
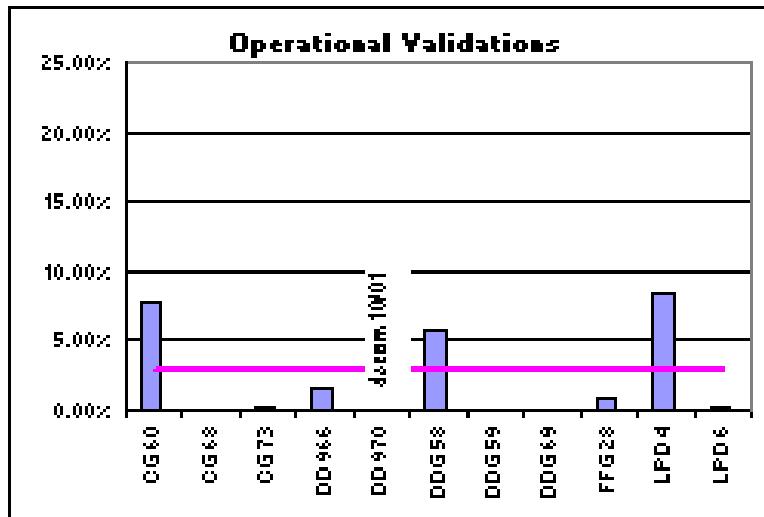
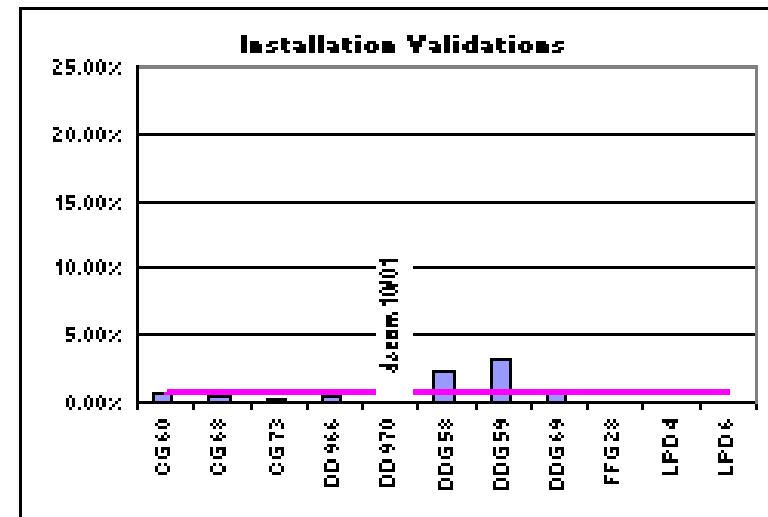
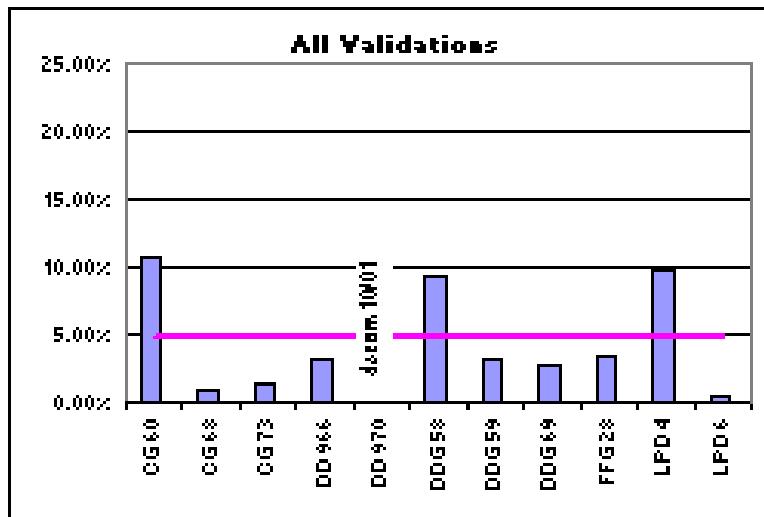
- Average at 24 months: 229 unique JCNs
- Avg. # maint actions for a ship in the fleet per 18 month cycle: 4.950

Round 2 - # Maint Actions for Validated RICs



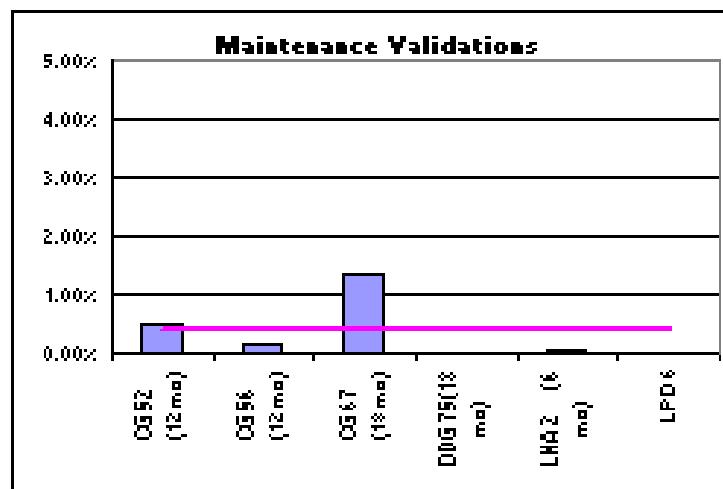
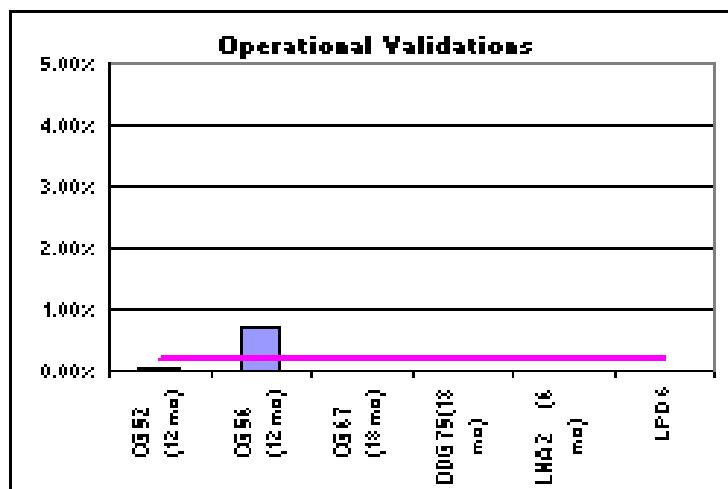
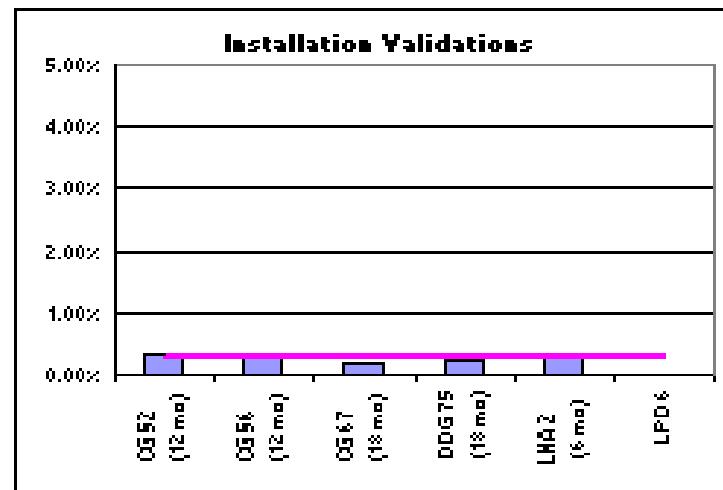
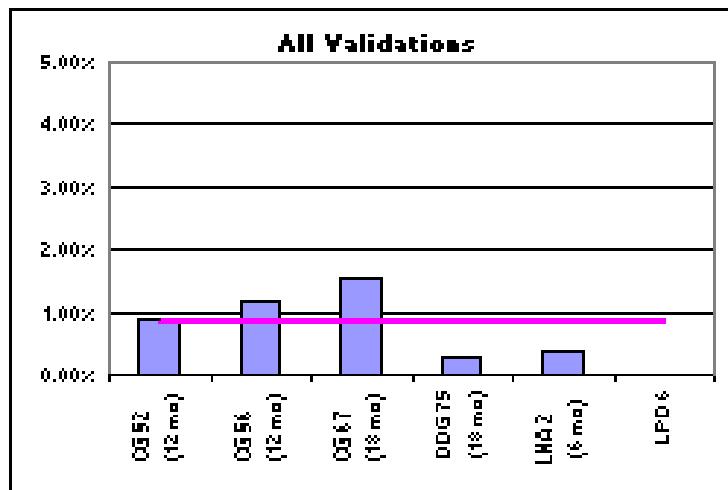
- Average to date: 51 unique JCNs
- Avg. # maint actions for a ship in the fleet per 18 month cycle: 4.950

% of Total Maint Actions for Validated RICs - 24 Month Measurement



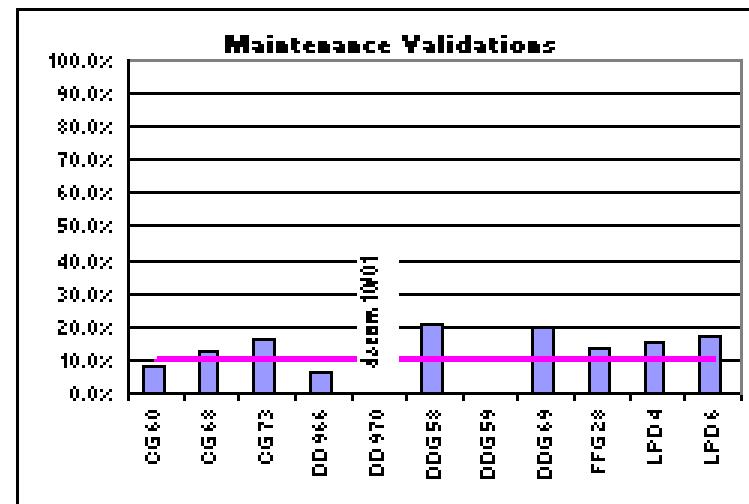
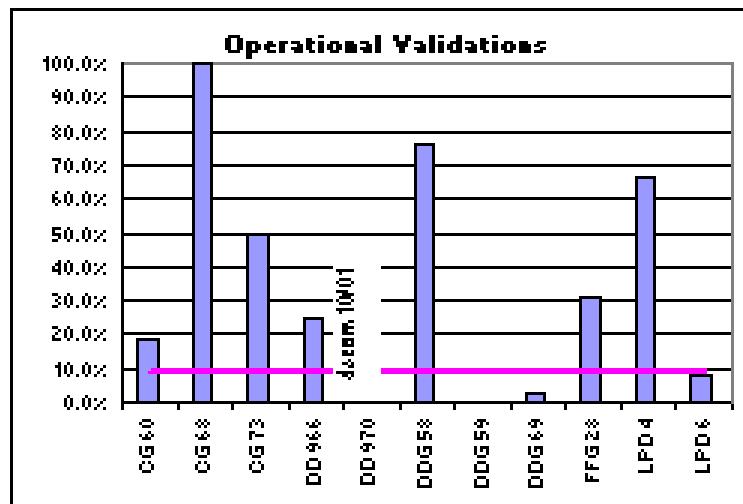
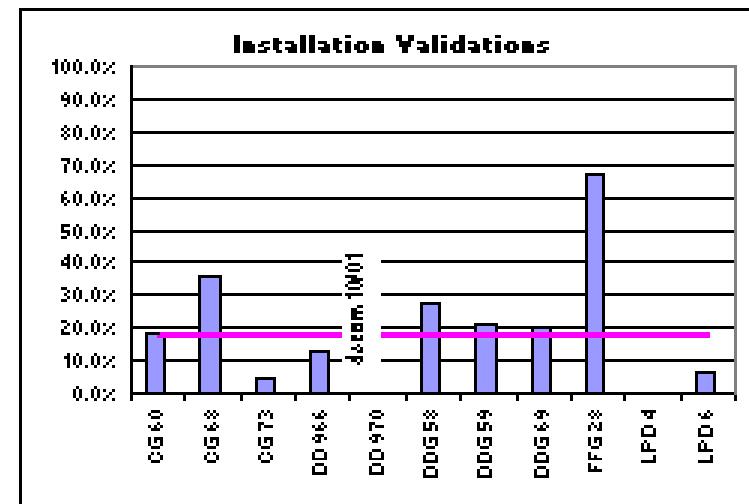
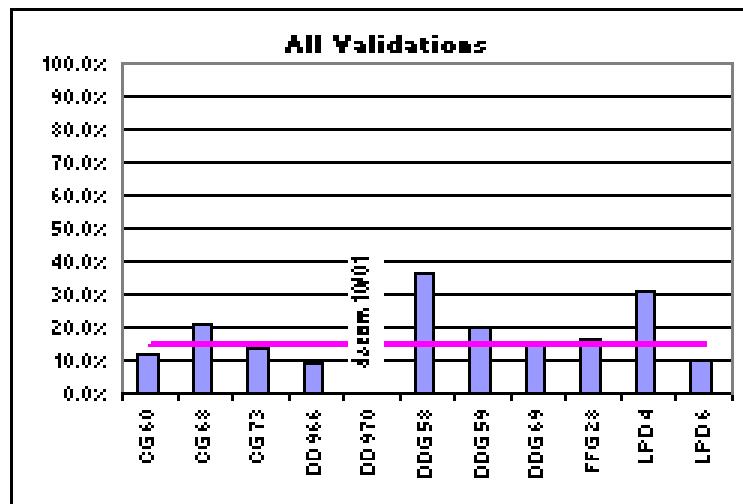
- Average number of maintenance transactions per ship for an 18 mo period = 4,950
- Average % of Total Maintenance Actions reported against Validated RICs = 4.88%

Round 2 - % of Total Maint Actions for Validated RICs



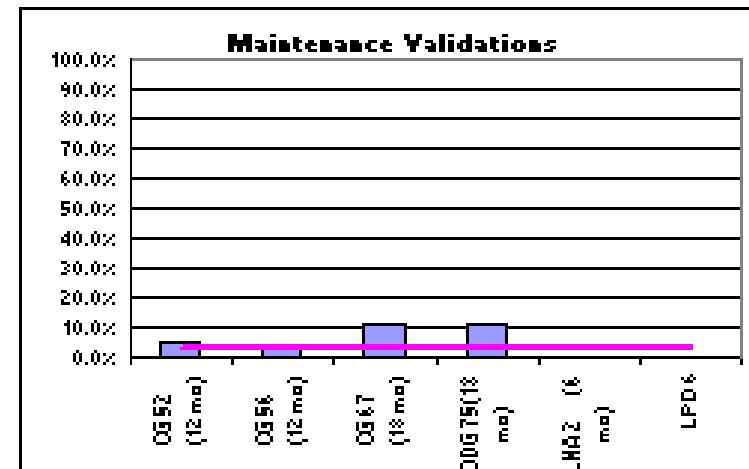
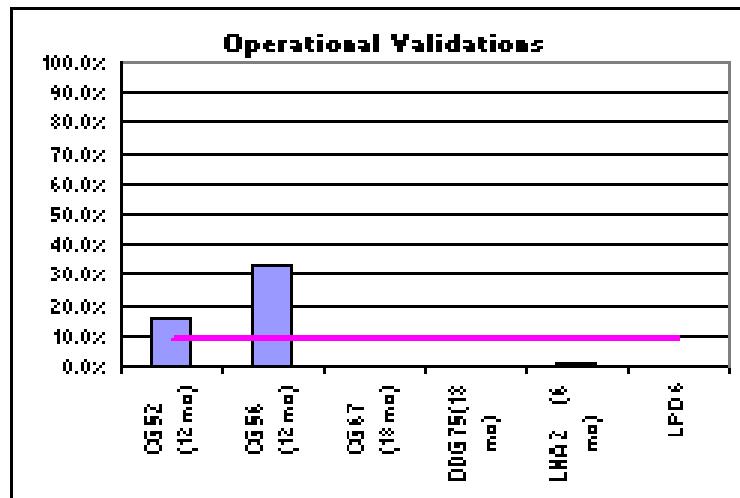
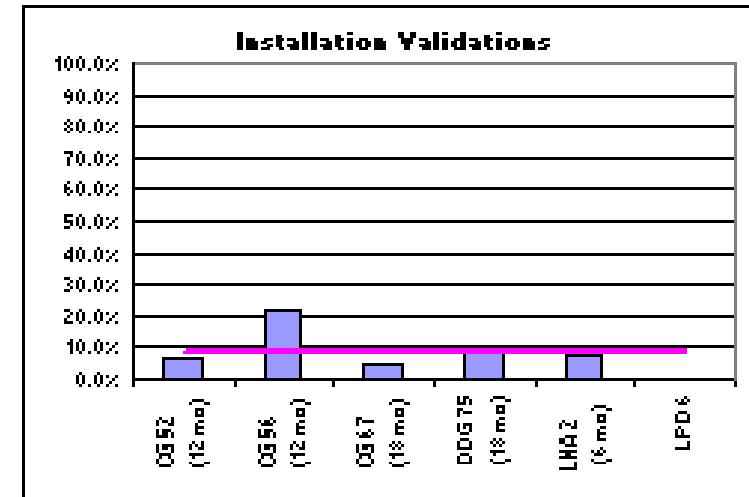
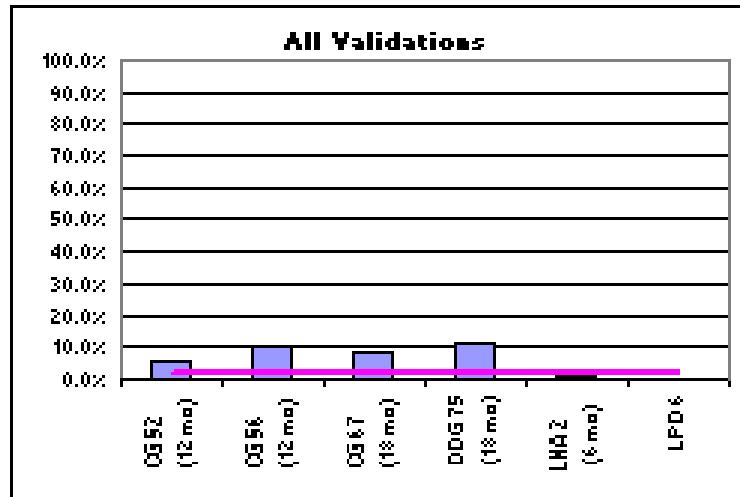
- Average number of maintenance transactions per ship for an 18 mo period = 4,950
- Average % of Total Maintenance Actions reported against Validated RICs = 85%

% Validated RICs with Follow-on Maint Actions- 24 Month Measurement



- Average % of Validated RICs showing follow-on validations = 14.9%
- 85.1% of all validations have no follow-on maintenance actions

Round 2 - % Validated RICs with Follow-on Maint Actions



- Average % of Validated RICs showing follow-on validations to date = 2.2%
- 97.8% of all validations have had no follow-on maintenance

Metrics – Putting it all together

Metric		Round 1 Average	Round 2 Average (to date)	Avg per ship per 18 mo cycle
Supply	Effectiveness	+1.9%	+1.9%	~ 74%
	G' Source Code	100 avoided	119 avoided	~ 150
Maintenance	# Maintenance Actions	229 JCNs	51 JCNs	~ 4,950
	% of Total Maintenance Actions	4.88%	0.85%	
	% of Validated RICs	14.9%	2.2%	

- Need to finish collecting data for 2nd round of metrics before making conclusions about process changes
 - Have we standardized processes?
 - Have we made the processes better?
- Need to think about the significance of what we are measuring
 - Are we measuring the “right” things? For the right reasons?
 - How do we tie all this together?
 - What is “good” and what is “bad”? Are we really helping the fleet?
- Equipment Downtime/Customer Wait Time (CWT) Avoidance?
 - CWT is currently the OPNAV preferred readiness metric
 - Part of Ao equation - measures how long the maintainer has to wait for a requested part
 - Can be calculated using 3M or CASREP data
 - (Date last part was received) - (Date first part was demanded)